
TECHNICAL MEMO

June 12, 2008

JK

TO: Internal File

THRU: James D. Smith, Permit Supervisor *JS 06/06/08*
Steve K. Christensen, Senior Environmental Scientist/Hydrologist, Lead *SKC*

FROM: David Darby, Senior Environmental Scientist *DD*

RE: Permit Area Expansion- 240Acres, Canyon Fuel Company, LLC, Dugout Canyon Mine, C/007/0039, Task ID #2958

SUMMARY:

On April 18, 2007 Canyon Fuel Company LLC submitted a revised amendment to the Dugout Canyon Mine plan. The original amendment, submitted on October 25, 2007, proposed to increase the permit area by 560 acres. Canyon Fuel Company has now removed some of the property from the amendment. The proposed mine plan amendment will add 240 acres of Federal Coal Lease, U-070674-027821 in Section 17, T.13 S., R.13 E. SLB.

DEFICIENCIES

R645-301- 622: The Permittee needs to show the amendment area on Plates 6-6 and 6-7 in the Confidential Folder.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

TECHNICAL MEMO

Analysis:

The Permittee submitted a description of the permit area in Section 114 and Plate 1-4, a map showing both the permit area and proposed mine expansion area. The proposed IBC constitutes an area of 240 acres. The IBC will involve the area northeast of the permit area. Plate 5-7 shows the proposed mining sequence. Plate A is a map showing the potential subsidence area is supplied in Appendix 5-12. No surface facilities are proposed for the extension. Only underground development will take place and that will be limited to entries and a cross-cut.

Findings:

The Permittee has addressed the minimum requirements of the Permit Area Section of the regulations.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

The Permittee provided some information to describe the geology, and mining of the expansion area. Regional geology is described in Chapter 6 of the MRP. The geology submittal for the extension area consists mostly of maps. Plate 6-1 shows the geology of the permit and expansion area. The area lies above the escarpment in the Book Cliffs.

The PHC, Section 728, in Chapter 7 states the information for acid and toxic forming material is in the Geology Section, Chapter 6. Acid and toxic and alkaline chemical analyses are mentioned in Section 624.300. The information on acid and toxic forming materials to address R645-301-624.310 through 624.330 is presented in Appendices 6-1 and 6-2. Roof and floor and seam analyses for the Rock Canyon seam are provided in Appendix 6-2. Roof and floor analyses for the Gilson coal seam are provided in Appendix 6-1. The analyses are dated August 24, 1995. A sample location is identified in Figure A-1 from the Gilson Coal Seam in the Dugout Canyon Mine. The operator used Table 2 in the "Guidelines for Management of Topsoil and Overburden for Underground and surface Coal Mining" as a guide. Mine refuse is analyzed frequently by Canyon Fuel Company (Dugout Mine) for acid and toxic materials. Acid and toxic sampling was conducted of the roof, floor and coal seam to be mined.

After the technical review of December 5, 2007 there was a challenge by mine operators with regard to the parameters required for acid and toxic monitoring. Some operations are monitoring the mine refuse on a tonnage basis as it is placed on the refuse pile. There is a

TECHNICAL MEMO

difference between monitoring the mine refuse and the coal seam. Monitoring the mine refuse is an operational function that provides information to ensure an uncontaminated surface after reclamation, while monitoring for acid and toxic materials in the roof, floor and coal seam is a baseline function that provides information that gives the potential for impacts before mining disturbance takes. The Dugout Mine, like many other mines, is active and monitoring the refuse as it is placed in the pile. Many of the parameters used to assess the refuse material are the same requested for assessing the acid and toxic materials near the coal seam. The Division has decided to reevaluate the parameters requested for monitoring acid and toxic forming materials of the roof, floor and coal seam. The regulations provide some guidance of which parameters to evaluate, but does not cover all of the parameters previously requested by the Division for roof, floor and coal seams. The Division intends to seek input from OSM.

The change in the amended area, type of mining and amount of coal to be extracted will give the Division time to derive a standard for acid and toxic monitoring when the refuse pile is also being monitored for acid and toxic parameters. At that time the Division may or may not require more analyses for roof, floor and coal seam.

Findings:

The information provided by the Permittee meets the minimum requirements of the Environmental Resource Information – Geologic Resources Information section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Coal Resource and Geologic Information Maps

The geology map, Plate 6-1, illustrates the stratigraphy of the Dugout Canyon Mine area. A geology map shows the expansion area is capped with the Colton Formation. Mining of the IBC will take place in the Gilson coal seam of the Blackhawk Formation. The dip of the strata is to the north-northeast at approximately 10 degrees. The approximate location of the Gilson is depicted on the map. The legend shows the Plate 6-2 in the MRP shows the relation of the two coal seams and the top of the Kenilworth Sandstone. The Gilson Coal seam lies below the Rock Canyon Coal seam. Figure 6-1 and Plates 6-3, 6-3a and 6-3b are geologic cross-sections that illustrate the stratigraphic relations of the permit area.

TECHNICAL MEMO

An updated overburden thickness map, Plate 6-4 - Rock Canyon Seam/Gilson Seam Overburden Thickness has been submitted. The operator also submitted two overburden isopach maps Plate 6-6 and 6-7 in the Confidential Folder

Permit Area Boundary Maps

The Permit area boundary is illustrated on several maps in the IBC submittal. No mining is projected outside the proposed permit area.

Well Maps

No well or boreholes are currently proposed for the IBC.

Findings:

The information provided by the Permittee does not meet the minimum requirements of the Maps, Plans and Cross Sections of Resources Information section of the regulations.

R645-301- 622: The Permittee needs to show the amendment area on Plates 6-6 and 6-7 in the Confidential Folder.

OPERATION PLAN

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

Maps have been supplied showing two areas of projected mining. New guidelines for mining conditions are being prepared by MSHA, which will limit mining with deep cover. This may change the proposed mine plan.

Findings:

The Permittee has submitted sufficient information to address the minimum requirements of the Coal recovery regulations.

Page 5
C/007/0039
Task ID #2958
June 12, 2008

TECHNICAL MEMO

Recommendation:

The IBC submittal is not recommended for approval until all deficiencies are addressed.

H:\Mines\Dugout Mine 0070039\dwdTask2958.doc